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EPA PSP

June 30, 2016

Document Processing Desk
Office of Pesticide Programs **(7504P)**
U.S. Environmental Protection Agency
One Potomac Yard, Room S-4900
2777 South Crystal Drive
Arlington, VA 22202-4501

Attention: **Ms. Heather Garvie, PM Team 24**
Fungicide Herbicide Branch, Registration Division

Subject: **Acuron® Herbicide (EPA Reg. No. 100-1466)**
Condition of Registration: Proposed Stewardship Program

Dear Ms. Garvie,

Syngenta Crop Protection, LLC respectfully submits a proposed stewardship program for Acuron® Herbicide (100-1466), which contains the active ingredients bicyclopyrone, *S*-metolachlor, atrazine and mesotrione. This program was requested in the original conditional registration notice for Acuron. Syngenta has already initiated some of the outreach and educational portions of this plan in order to raise awareness for the 2016 growing season and looks forward to review and additional inputs from EPA.

Please find enclosed to support this submission:

- Proposed Syngenta Acuron Stewardship Plan

Fees for Service
As this submission was requested by EPA, the assignment of a PRIA category is not applicable per the Pesticide Registration Improvement Renewal Act (PRIA III).

Thank you in advance for your attention to this submission. If needed, I may be reached at (336) 632-6730 or via email at cherilyn.moore@syngenta.com.

Kind Regards,

Cherilyn Moore
Regulatory Manager, Herbicides

Enclosure

Proposed Syngenta Acuron Stewardship Plan:

A condition of registration of Acuron by EPA

Acuron (EPA Registration No. 100-1466) is a brand new herbicide by Syngenta Crop Protection LLC. It is unique in the fact that it is a formulated premix with four separate active ingredients (a.i.) including the new a.i. bicyclopyrone. Acuron offers many advantages over traditional premix herbicides including the ability to minimize the tank-mixing of additional herbicides with Acuron due to the high level of control of difficult weeds provided by bicyclopyrone. For example, Acuron does not require the addition of extra atrazine to achieve excellent weed control under many conditions. As a result, Acuron is an excellent fit for a one pass weed control program with many edaphic conditions and weed pressures. As part of the registration requirements for Acuron, EPA required an annual reduction of 3.6 million pounds of atrazine on base acres treated by certain Syngenta products (compared to an established baseline) by 2020. EPA also required Syngenta to develop an Acuron stewardship program that will help meet the registration requirements and as such, Syngenta will undertake a multi-facetted campaign to educate farmers, retailers, extension and crop advisors about the many benefits and the proper use of Acuron. Particular emphasis will be placed on watersheds in areas with high corn production that are sensitive to herbicide loss due to surface run-off. Syngenta has already initiated portions of this plan and look forward to additional inputs from EPA.

Goal

The goal of the Acuron stewardship plan is to ensure the achievement of the 3.6 million pound annual atrazine reduction milestone (by year 2020) as set forth in the Acuron registration agreement and to promote sustainable production agricultural practices. One aspect is to raise awareness among Acuron users of the ability to minimize the tank-mixing of additional herbicides with Acuron due to the high level of control of difficult weeds provided by the addition of bicyclopyrone. Additionally, awareness will be raised among Acuron users of the resistance management advantages provided by multiple modes of action within Acuron, the importance of IPM, soil management, and BMPs to reduce offsite movement of herbicides.

Plan

A multi-faceted approach will be implemented that will include the following:

- The Syngenta sales force will be trained and instructed to discuss with corn growers, dealers and applicators the minimization of tank mixing with additional herbicides (especially atrazine).
- Additionally, the Syngenta sales force will distribute a professionally developed Acuron stewardship brochure and presentation materials.
- Syngenta Stewardship will provide educational materials to national and state stakeholder groups including commodity organizations, University Extension, State Departments of Agriculture (NASDA), and certified crop advisor groups. These will include the aforementioned brochure as well as a standard power-point presentation to be delivered by Syngenta Stewardship personnel.
- A special training focus on states with "sensitive" watersheds. This list of states will be guided by Syngenta's Atrazine Monitoring Program (AMP) and its Atrazine Ecological Monitoring Program (AEMP).
- GfK data will be monitored to refine and target stewardship efforts.
- Watersheds within Syngenta's Atrazine Ecological Monitoring Program (AEMP) were selected to be representative of the most sensitive watersheds in the country for atrazine surface run-off. As part of Syngenta's ongoing efforts in the AEMP watersheds, Acuron will be highlighted as one of many best management practices for reducing losses of atrazine from the field. A main point of discussion will be that Acuron contains a reduced rate of atrazine compared to many alternative herbicides and does not need to be tank mixed with additional atrazine in many situations due to the additional weed control provided by bicyclopyrone.
    - Slides making these points will be incorporated into routine grower/dealer presentations.
    - Syngenta will meet with the ag retailers in these watersheds and provide the information.
    - Regular watershed meeting with growers will also include the Acuron best management practices.
    - The previously mentioned brochure will be made available.

Deliverables

There will be two main educational items that will be developed and used across the outreach and education campaign as needed. They are the "Proper Use and Benefits of Acuron" brochure and a similar electronic presentation (see attachment) that will be used in public venues to educate the audience. Both will cover these points:

- The ability to minimize the tank-mixing of additional herbicides with Acuron due to the high level of control of difficult weeds provided by bicyclopyrone. For example, awareness of reduced atrazine rates needed to achieve weed control with Acuron, as

well as the excellent fit for Acuron in one-pass weed control programs in corn will be included.
    - Information from field trials supporting this will be included (example provided in appendix 1).
    - Potential for Acuron as a one-pass pre-emerge herbicide option in corn without the need of additional herbicides.
- The key benefits of multiple mode-of-action active ingredients in a single product for management of resistant weeds.
    - Why it is important to use multiple modes of action to control resistant weeds.
    - A list of the common resistant weeds controlled by Acuron.
    - The importance of diversity in weed control and IPM practices.
- The importance of Integrated Pest Management (IPM) and soil stewardship practices (such as low/no-till practices).
    - Benefits of reduced tillage in reducing water run-off and soil loss. How diversity including multiple modes of action fit an IPM approach.
- Education and outreach for watershed stewardship and conservation practices, and the use of Best Management Practices to reduce the offsite movement of herbicides.
    - List of additional watershed best management practices that are known to be effective at reducing herbicide offsite movement (appendix 2).
    - Importance of label education and awareness of herbicide use directions and label conservation requirements.

Timeline

Acuron stewardship and education has been initiated in key areas and a broader plan will be implemented going forward. This extensive stewardship plan will continue annually until the milestones of the Acuron atrazine reduction agreement have been met or by 2020. Syngenta will work with EPA to amend or change the stewardship plan based on feedback from EPA; however some of the outreach and educational components have already started in order to raise awareness for the 2016 growing season. All materials generated for the Acuron Stewardship Plan will be submitted to EPA.

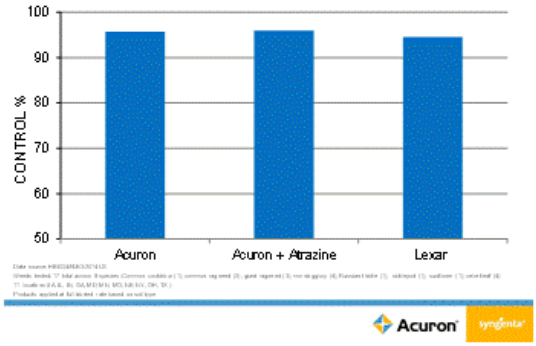
Acuron™ Stewardship

- Contains four active ingredients and three complementary, overlapping modes of action for multi-targeted control of the most difficult weeds in corn
- Acuron fits perfectly where atrazine needs to be managed in watersheds sensitive to run-off.
- The flexibility of Acuron allows for a one pass or two pass herbicide program and should be used in conjunction with other best management practices like edge of field buffers, grassed waterways, and conservation tillage to help prevent loss due to run-off.
- Excellent pre- and post-emergence crop Safety enables Acuron to be applied from 28 days pre-plant (including burndown) up to 12-inch corn
- Always read and follow label directions.

No need to spike with atrazine.

Studies show no weed control benefit from the addition of atrazine.

Acuron control of large seeded broadleaf weeds 28 DAT



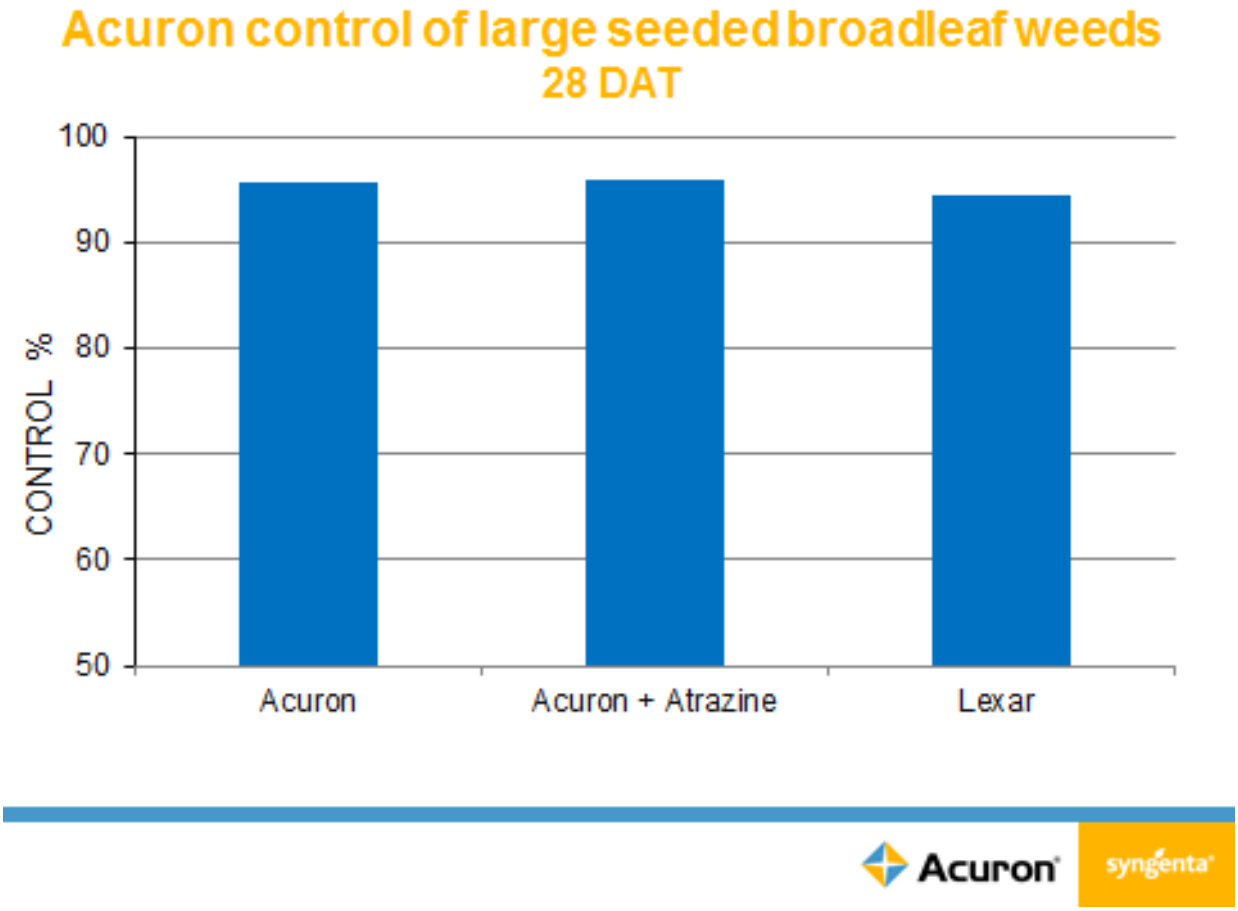
Numbers to consider

4 out of 5 farmers are actively searching for new products, with the main reason to achieve better weed control*

Acuron is the perfect one pass herbicide to combat weed resistance issues.

syngenta®

Appendix 1. Example of information from field trials supporting Acuron use with and without atrazine and compared to Lexar (which contains a higher rate of atrazine than Acuron)



Data source: HBI004A&B3-2014US

Weeds tested: 17 total across 8 species -Common cocklebur (1), common ragweed (2), giant ragweed (3), morningglory (4), Russian thistle (1), sicklepod (1), sunflower (1), velvetleaf (4)

11 locations (IA, IL, IN, GA, MD, MN, MO, NE, NY, OH, TX)

Products applied at full labeled rate based on soil type

Treatment List:

1.	Acuron	2400 - 2890 g ai/ha (2.5 – 3.0 qt/A)
2.	Acuron	2400 - 2890 g ai/ha (2.5 – 3.0 qt/A) + AAtrex 1120 g ai/ha (1 qt/A)
3.	Lexar EZ	3100 - 3630 g ai/ha (3.0 – 3.5 qt/A)

Appendix 2.

Effective best management practices for managing atrazine in watersheds sensitive to off-site movement of herbicides:

The 4Cs of correct atrazine use

Correct Rate
• Lower use rates in highly sensitive watersheds.
Correct Time
• Split applications of atrazine between pre-emerge and post emerge.
Correct Product
• Use pre-emerge herbicides that have multiple modes of action and reduced rates of atrazine (like Acuron).
Correct Reason
• Use an IPM approach for weed control. Don't add extra atrazine to the mix unless there is a direct agronomic and economic benefit.